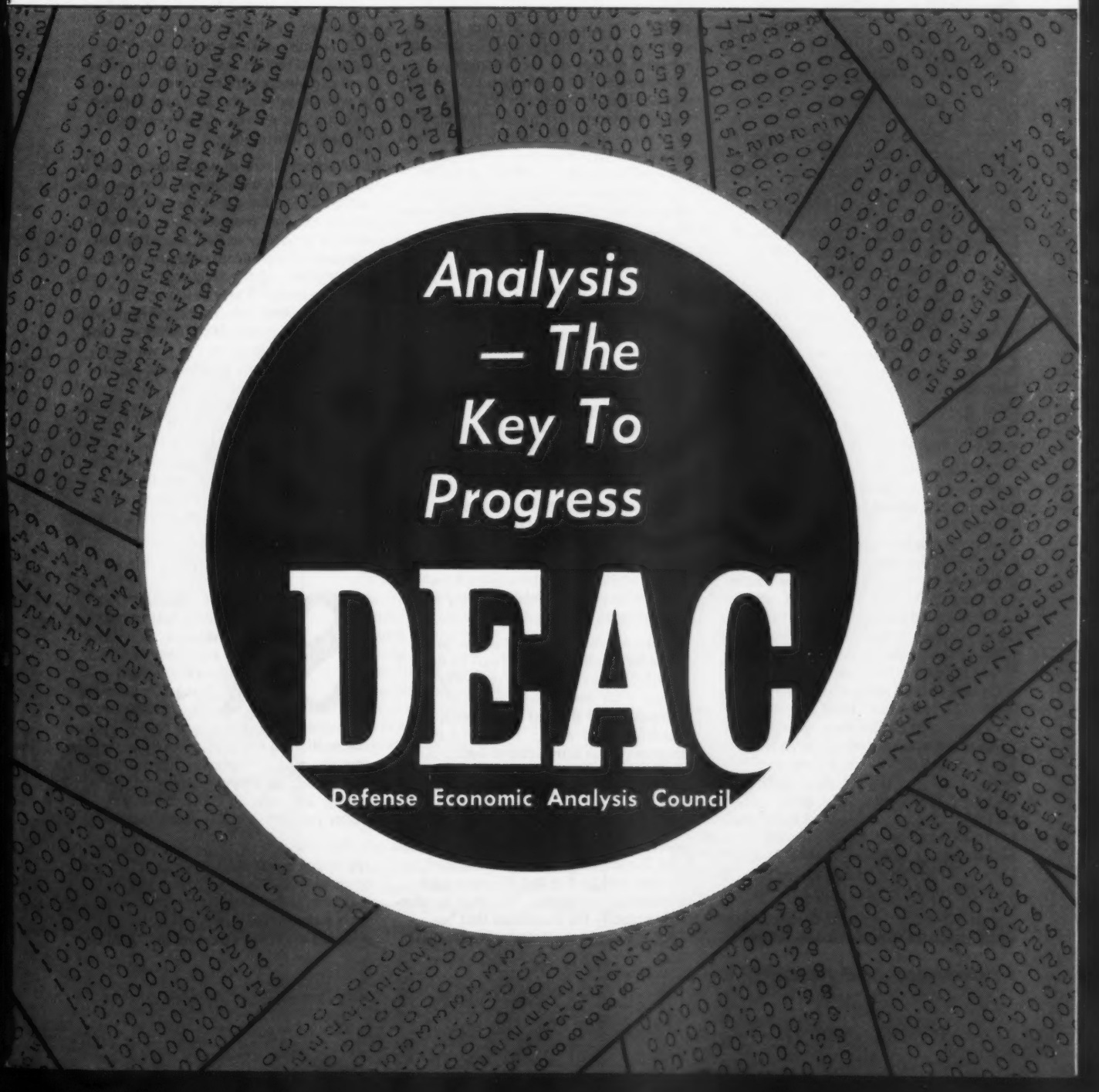
COMMANDERS DIGEST

VOL. 16, NO. 6/AUGUST 8, 1974



I want to emphasize to you the urgent need for improved and expanded Economic Analysis and Program Evaluation in DoD. The need for improved information for decision-making stems from my belief that the business of the Department of Defense must be conducted more effectively, and with greater visibility, than ever before. DoD is not alone in this respect. The American people are demanding a strict accounting from all institutions, public or private, which manage the Nation's human and material resources.

To measure up to the public's expectations, it is essential that action be preceded by analysis and that objectives and performance be adequately evaluated and explained. In DoD, you hold the key to progress in this regard. Analysis is the key to progress.

I'd like to discuss more specifically several areas where improved analysis and evaluation are required.

One of the all-pervasive factors that affects our private and business lives is inflation. Many of you are familiar with the statistical techniques used to analyze, evaluate, and report on this financial phenomenon. Yet we have done too little in applying these techniques in order to gain understanding of inflation's impact on Defense activities.

The Congress, the press, and the public continually point with alarm to the record-high Defense budget sought for Fiscal Year 1975. As you know, we are asking for total obligational authority of over $92 billion and this would result in outlays or expenditures of $86 billion in Fiscal 1975. Our critics point out that the record budget of $86 billion in outlays is greater than the $79 billion spent at the height of the war in South Vietnam. Our critics ask for a "peace dividend" and go on to explain that $86 billion for Defense in 1975 is even greater than the $82 billion spent in 1945 at the height of World War II. These dollars, of course, are current dollars, and we have not adequately explained to the public that, in terms of real value, we actually spent $300 billion in 1945. Also, in terms of constant dollars, expenditures since 1968 have been reduced and a "peace dividend" of over $30 billion has been paid.

The $86 billion we hope to spend in 1975 compares with about $80 billion this year and $74 billion in Fiscal 1973, or increases of $6 billion each year. Essentially all of these increases are accounted for by inflation. But even with these dramatic increases the Defense share of the economy is declining. In the past 20 years, the portion of the Federal budget spent on Defense has been essentially halved.

In the past two decades, the Defense share of the Gross National Product (GNP) has been reduced from 10 percent to less than six percent. In terms of constant dollars, we are buying less development and production than during the 1950s and 1960s, and yet costlier weapons systems are needed to counter even more sophisticated threats. We now have the smallest number of military personnel since the outbreak of the Korean War over two decades ago. In terms of ships, we have the smallest Navy since World War II yet the Russians are aggressively building a significant surface and submarine fleet.

It seems obvious that if we do not better analyze, evaluate, and report on this phenomenon of inflation, we shall not obtain the resources needed for adequate national defense.

One specific area where we are taking positive action on inflation is in our reporting on major weapons systems. You may be familiar with our reporting to Congress, and through Congress to the American public, on major weapons systems. Each quarter we submit a report to Congress on each major weapons system. These Selected Acquisition Reports (SARs) report on past progress, current status, and future plans for each program in terms of schedule, cost and performance.

Unfortunately, our acquisition programs have been characterized by cost growth. For example, the report to Congress for the last six months of Calendar 1973 showed cost growth of over $7 billion. About 35 percent of the growth was attributed to inflation greater than previously predicted. But our estimates of inflation in the past have not been adequately developed, reviewed, or communicated. However, in the next issuance of the SARs, we will be identifying for the first time the amount of inflation included in our planning and development estimates. We shall be identifying clearly the escalation that has taken place and the amount we forecast for the future. All program changes will be clearly stated in base-year dollars, and escalation will be separately reported. Also, since we are not clairvoyant, and cannot predict future inflation precisely, we shall describe the amount of additional inflation that will result for a number of potential inflationary rates.

Our more precise treatment of escalation in SARs must be paralleled by improved analysis and communication of escalation in all of our activities. This will require more work in developing escalation factors and in understanding and explaining variances from plan. But it will aid in our planning and decision-making and provide more meaningful financial information.

Another factor that has contributed to cost growth in weapons systems has been unrealistic initial estimates of cost. Furthermore, cost problems have not been known promptly so that, too often, disclosures of significant overruns catch us by surprise. Much good work has been done by many of you in improving techniques and procedures for improving independent cost estimates, but we must do more. I believe we can if we forthrightly address the problems and forthrightly deal with the facts. In this regard, I believe that program managers should be held fully responsible for their cost estimates and for managing to their cost targets. The purpose of independent cost estimates, such as parametric cost estimates, should be to verify that the program managers' estimates are realistic and attainable.

Significant differences between independent and program managers' estimates should be reconciled, and the program manager should change his estimate when his projections prove unrealistic. The purpose of forcing the reconciliation of estimates is to make sure that the program manager modifies his plans when his estimate proves to be wrong. The sooner reality is faced the better problems can be accommodated.

We have too many cost estimates for too many purposes and we should strive to reconcile to only one. We can find instances today where a program manager's estimate has not been reconciled with the contractor's estimates. And on

Why DoD Needs Improved Economic Analysis

By
TERENCE E. McCLARY
Assistant Secretary of Defense
(Comptroller)

the same program we have a different cost estimate from the commodity command, another estimate from the materiel command, and still another estimate from the service staff. And then at the Office, Secretary of Defense (OSD) level we have the CAIGs (Cost Analysis Improvement Groups). If we have separate estimates they must be reconciled, and the one estimate used for decision-making and reporting should be the best estimate of projected accomplishment toward which the entire organization is working in unison and explaining in concert.

The last area I want to discuss is a subject addressed by Deputy Secretary of Defense William P. Clements, Jr. recently to the American Society of Military Comptrollers. Secretary Clements urged comptrollers and financial managers to actively participate in putting the Department of Defense on a firm, credible business basis, and he stated that, as an absolute requirement, we must all work together to improve the financial controls and reporting systems that are essential to the management of a modern business enterprise. One area criticized by the Secretary was the inconsistency and lack of standardization of cost and accounting systems. A specific instance was the lack of uniformity of data from the three service academies which made it impossible to compare costs of education among the service academies or to other colleges or universities.

A significant effort must be made during the next few years to standardize our accounting practices and systems. Some progres has been made and an important milestone was reached in June when a draft of a joint depot maintenance cost manual was made available. This is the product of a task force that has been working for a year under the sponsorship of the Joint Logistics Commanders. One of the innovations, as applied to government accounting, is the computation of depreciation. This will permit cost comparability, so that the cost of work performed in one government facility can be compared with costs of other government facilities or with costs of commercial facilities. The forthright development and expression of comparable cost data should motivate each facility to perform better and should give business managers a better basis for measuring performance.

440 Attend DEAC Symposium

The Defense Economic Analysis Council (DEAC), with the assistance of the National Council of Associations for Policy Sciences, recently held its second annual symposium at the Industrial College of the Armed Forces at Ft. Leslie J. McNair in Washington, D.C. The theme of the symposium was "The Use of Economic Analysis by Governmental Managers".

Approximately 440 persons attended. Of those participating, 38 percent were Army; 18 percent were Navy; 4 percent were Marines; 13 percent were Air Force; 20 percent were DoD; 3 percent were government, non-DoD; and 4 percent were from outside the government sector.

The emphasis of the symposium was on workshops devoted to different aspects of Economic Analysis and Program Evaluation relative to the teaching and the application of these techniques. There were nine workshops, most ranging in size from 20 to 60 persons, with one having 120 people in attendance. The workshop formats included both presentations and discussions.

I. L. Seidel, DEAC chairman, charged each workshop to come up with specific recommendations on the use of Economic Analysis to be presented to the Assistant Secretary of Defense (Comptroller) to improve the application of Economic Analysis. These recommendations were an important product of the symposium and are presently being studied and coordinated within the DEAC prior to referral to Assistant Secretary of Defense (Comptroller) Terence E. McClary.

A highlight of the symposium was the DEAC awards program, which was initiated this year. Symposium proceedings will be published and distributed to attendees. Others desiring a copy may write to DEAC, OASD(C), Washington, D.C. 20301.

Defense's Need for Sound Analytical Techniques

By
MELVIN H. BAKER
Deputy Assistant Secretary of Defense
(Management Systems)

Since its beginning four years ago, the Defense Economic Analysis Council has been the structure that the Office of the Secretary of Defense has looked to for advice and assistance in promoting the understanding and use of sound analytical techniques throughout the Department of Defense. A review of approximately one-half of the DoD directives and instructions reveals that prior to 1970 the issuances requiring the use of these analytical techniques totaled only four. As the issuances have been reviewed and updated in the four years since that time, we have seen the number requiring the use of these techniques grow by over 600 percent. Assuming our sample to be representative of all DoD issuances we have seen those now requiring systematic analysis expand from eight to over 50.

A good example of the impact of this trend is DoD Instruction 4165.45, "Determination of Family Housing Requirements," which was revised in January 1972, to include these words:

"The annual military construction authorization for the DoD Family Housing Program will include various components designed to alleviate the military family housing need. Selection of the appropriate program component will be influenced by the projected duration and level of justification requirements and, insofar as applicable, economic analysis of alternatives in accordance with DoD Instruction 7041.3 (which most of you recognize as our Instruction titled, 'Economic Analysis and Program Evaluation for Resource Management').

"In those situations where economic analysis is applicable as an aid in selecting the best component to satisfy the requirement, such analyses will be made available to ASD(I&L) at the time of submitting annual proposals."

Since this change to the instruction back in 1972, we have seen what I believe to be one of the better Economic Analyses ever submitted to the Secretary of Defense in support of a major decision. This study on family housing involves the expenditure of approximately 1.2 billion defense dollars annually. While this study is still in draft form and has not been released in total, I would like to review some of the elements that make it particularly noteworthy.

This primarily concerns the treatment of benefits of the program and the use of several techniques of analysis that are often overlooked. Four basic types of benefits which accrue from family housing were identified as follows:

1. Responsiveness of key personnel who live on base.
2. Morale and effectiveness of personnel who are more satisfied due to Defense housing.
3. The psychological contract between the Service and its personnel that the Service "takes care of its own," and
4. Increased retention of personnel due to their satisfaction with Defense housing.

If you think that these kinds of things are tough to get a handle on you are right, but this study did a remarkable job in doing just that. However, the study never lost track of the real benefits that should be obtained by the program in support of the national goal that every family should have adequate housing or, more specifically, the DoD goal that every military family should have adequate housing. The analysis examines the efficiency of the family housing construction program as a means of achieving that goal. If new houses cost $1 million each and were still undesirable to live in, there would be none in the program. On the other hand, if houses didn't cost anything to build and were very desirable homes, DoD would build as many as possible.

There is a crossover point somewhere between these two extremes. The analysis attempts to determine on which side of that crossover point construction falls. It is not the tentative conclusion of this study that I am so much interested in relating to you as the various techniques employed by the analysts which are worth further consideration. The data for retention analysis—one of the key study variables—were taken from a sample survey of over 12,000 military personnel with dependents. The survey was taken in December 1973 at 17 of the continental United States locations where new construction is planned.

In the past we have not relied enough on the sampling techniques to furnish basic data. The results of this survey along with other key variables were further subjected to a simple sensitivity analysis to show the range over which the major conclusion of the study remained unchanged. For example, we hear a lot of comment on the validity of a 10 percent discount rate in determining present value. This study showed that the conclusion remained unchanged with any discount rate greater than 2 percent. So you see it wouldn't really matter if you believe that the proper rate is 10 percent or not, so long as you would agree that cash flows should be subjected to some discount rate equal to or greater than 2 percent.

I've used this example to illustrate to you the direction that we are going in terms of the use of these techniques in support of resource allocation decisions. Congress is insisting more and more that we do a better job in justifying our resources. Economic Analysis, Program Evaluation and Output or Benefit Determination techniques provide us with an excellent way to do just that.

DoD-WIDE 'EA' ENCOURAGED

By
I. L. SEIDEL
Defense Communication Agency
and DEAC Chairman

The Defense Economic Analysis Council (DEAC) was established four years ago to encourage the DoD-wide implementation of Economic Analysis (EA). The DEAC was created to advise the Assistant Secretary of Defense (Comptroller), the Military Departments and the Defense agencies on EA policies and procedures; and the way they could be applied in the planning, programming and budgeting system and other supporting decision-making processes.

Additionally, the DEAC undertook a principal role in reviewing and standardizing techniques and methodology used in justifying and recommending resource allocation decisions. We also became responsible for supporting educational programs that foster an understanding of these techniques of analysis and have attempted to enhance their utility and meaningfulness to both managers and operations personnel. These then are our objectives, our missions, our reason for existing. Now, what have we done? Let us look at some of the more recent achievements, our products. First, we have been in the publications business.

As most of you are probably aware, the DEAC Economic Analysis Handbook has turned out to be quite popular. In fact, counting both issues, the blue block and the yellow book, 11,500 copies have been printed and distribute thus far. Also this year we have added three additional DEAC pamphlets:

- The Directory of Training Courses, Films and Publications Related to Economic Analysis and Program Evaluation;
- The Glossary of Commonly Accepted Terms and Definitions, and,
- A Bibliography of Current Reference Materials.

Additionally, we are in the process of producing several new training films on Economic Analysis. We also have established an exchange program of outstanding case studies, and we have set up a formalized speakers bureau to provide interested organizations with qualified speakers. It is sort of a "Have Economic Analysis, will travel" approach. In addition, we now have a DEAC awards program which we initiated this year to recognize outstanding performance and contributions to our profession throughout our DoD activities.

The Benefit/Output Determination Committee sponsored several mini-symposia in Washington on output measurement and applications in the Military Departments. Proceedings of most of these were published and widely distributed. We also have a Training Committee that is investigating the application of Economic Analysis to the evaluation of training programs.

On the publicity side, we have published a DEAC Newsletter this year and we have had one recent issue of the *Commanders Digest* distributed DoD-wide devoted to the activities of the DEAC.

But perhaps one of the most important services that we in the DEAC can perform is to provide, first, a means of coordinating EA activities of the many diverse elements within DoD, and second, to act as a focal point for matters relating to Economic Analysis and Program Evaluation. Now we address these objectives in two ways; first, by providing the means of cutting across organizational lines at the upper echelons of DoD and, second, by providing a forum for communication between the upper levels of DoD and you—the managers at the operating level.

6 Publications Relate to Economic Analysis Evaluation

Bibliography of Economic Analysis Program Evaluation and Output Measurement

Directory of Training Films, Publication and Models on Defense Economic Analysis and Program Evaluation

Glossary of Terms for Economic Analysis, Program Evaluation and Output Measurement

Measuring Efficiency and Effectiveness in Army Materiel Command Depots and MSCs

Simplified Analytical Techniques—a series of five lectures on Sampling, Sensitivity Analysis, Delphi, Monte Carlo, and Regression Analysis

Why Canada is Enthusiastic About Output Measurement

These publications are available in a limited number of copies for individual requests from OASD(C) Management Systems, Pentagon, Washington, D.C. 20301.

In 1974 the Defense Economic Analysis Council (DEAC) initiated an awards program to honor outstanding individual performance in the area of Economic Analysis and Program Evaluation. Nominees were sought who had made significant contributions in the area of Economic Analysis and Program Evaluation.

Outstanding contributions included the establishment and promulgation of implementation procedures, improved and expanded training programs on Economic Analysis and Program Evaluation techniques, and the actual use of these techniques in improving the management of Defense resources.

For purposes of economy the DEAC awards program was run in conjunction with this year's American Society of Military Comptrollers (ASMC) award program. All persons nominated for the ASMC award category of "Outstanding Performance in Economic Analysis and Program Evaluation" were automatically considered for the DEAC awards. The response was exceptional.

The DEAC Steering Committee, which made the final selections, considered 56 nominees, all of whom possessed outstanding qualifications and had made significant

Lt. Col. William E. Chess,
Headquarters, Air Force Communications Service,
Richards-Gebaur Air Force Base, Missouri

"During 1973, Lieutenant Colonel William E. Chess, through hard work, ingenuity and dedication, successfully promoted the application and acceptance of Economic Analysis in Air Force Communications Service (AFCS). As Chief of the Cost and Economic Analysis Division, he developed, implemented and managed worldwide AFCS Economic Analysis training programs that resulted in the successful training of over 300 programmers, engineers and managers. He managed and directed the development of an Economic Analysis guide for use by AFCS personnel worldwide. He was also responsible for establishing command-wide policies and procedures that have resulted in the successful accomplishment of approximately 30 Cost and Economic Analyses during 1973 that when fully implemented will result in savings to the Air Force of over $2.5 million annually. His recognized technical expertise and ability have resulted in AFCS having one of the most successful and dynamic Cost and Economic Analysis Programs in the Air Force."

Major John R. Corson
U.S. Army Logistics Management Center,
Fort Lee, Virginia

"In 1973, Major John R. Corson made significant contributions in the field of Economic Analysis while assigned as an instructor and chairman of the Cost Estimating and Analysis Committee at the Army Logistics Management Center (ALMC). Major Corson was directly responsible for developing and presenting new blocks of Economic Analysis instruction in more than six different courses at ALMC. In addition to his instructor duties, Major Corson assumed the duties of chairman of the Cost Estimating and Analysis Committee, becoming a key member of a cost benefit analysis team which has been studying the proposed Army Materiel Command Installations Equipment Management System. The results of this study will be the basis for implementing the computerized Installation Equipment Management System at all Army Materiel Command (AMC) activities. Major Corson headed the Economic Analysis team that performed a major Economic Analysis for the proposed Army Logistics Management Center academic building addition."

FOUR OUTSTANDING PERFORMANCES

achievements in the area of Economic Analysis and Program Evaluation. The DEAC awarded four plaques for outstanding achievements and six certificates of appreciation. The awards were presented by the Honorable Terence E. McClary, Assistant Secretary of Defense (Comptroller), to the winners at the DEAC symposium banquet on May 20, 1974.

Listed below are the DEAC award winners and a brief summary of the achievements for which they were recognized.

Four plaques for Outstanding Performance in the field of Economic Analysis and Program Evaluation were awarded to:

Captain Paul J. Cunniff,
Headquarters, United States Air Force
Directorate of Management Analysis

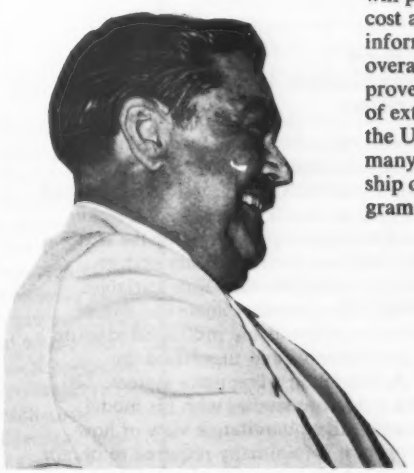
"Captain Paul J. Cunniff's most significant contribution stems from his role in the development and publication of the Economic Analysis Handbook. This handbook is commonly acknowledged as the definitive source of knowledge pertaining to Economic Analysis, not only in the Department of Defense, but also in wider spheres of government as well. As action officer on the initial project, Captain Cuniff personally defined the scope of the handbook and identified the functional audience which had the greatest need for assistance.

"His managerial abilities strongly influenced the actual production of the handbook by the committee members, and served as the catalyst for accomplishing the task. Further evidence of his analytical capabilities, managerial ability and literary talents is provided by the recently published Air Force Regulation 178-1, 'Economic Analysis and Program Evaluation for Resource Management,' which implements the DoD Instruction. The regulation forms the basis of the entire Air Force program."

Lowell A. Reade,
Naval Ship Systems Command,
Department of the Navy

"Lowell A. Reade, working directly with and within the entire Navy organizational structure, developed and instituted an entirely new concept of management for the multi-million dollar Design Services Allocations Program.

"Mr. Reade, by his personal leadership, initiative, direction, and stamina, caused to have published a life-cycle management manual setting forth uniform operating procedures and regulations in support of the program. Significant advantages have and are occurring for the Navy as a result of Mr. Reade's efforts. Mr. Reade is developing and implementing an information data system which will provide current cost and progress information. The overall program improvements will be of extreme value to the U.S. Navy for many years in its ship overhaul program."



...and Six Certificate Winners

Six Certificates of Appreciation for Significant Contributions in the field of Economic Analysis and Program Evaluation were awarded to:

Major Thomas H. Engebretson
Directorate of Data Automation
Headquarters, United States Air Force

"Major Thomas H. Engebretson was Headquarters, United States Air Force Project Officer for the high priority, very complex USAF Major Command Automatic Data Processing Program during 1973. This program is estimated to save $18.9 million through the system's life if automatic data processing equipment (ADPE) is purchased, or $9.5 million if ADPE is leased. The Economic Analysis identified 33 computer systems and 241 manpower authorizations that could be eliminated, and 19 data processing installations that could be consolidated into 10. In addition to preparing an outstanding Economic Analysis, Major Engebretson developed superior methods to track progress in meeting milestones and to insure that savings would be realized.

"At this point in the project, all projected savings have been realized on schedule. In addition, Major Engebretson rewrote and clarified the Economic Analysis and milestone tracking chapters of AFM 300-12, currently being staffed for publication, which will be used by all field activities."

Dr. Kingsley E. Forry
U.S. Army Communications Command
Ft. Huachuca, Arizona

"During the past two years, increased down-time has seriously degraded the availability of Defense Satellite Communications System (DSCS) Satellite Earth Terminal. Dr. Kingsley E. Forry determined that the best solution to this problem could be found by determining the mathematical relationships between parts inventory system availability, cost factors, and other economic variables. He developed a model which could evaluate the cost of logistics support versus worldwide and individual satellite system availability requirements and supervised the implementation of the model on a computer system. Dr. Forry has conducted numerous studies with his model, providing management with a quantitative view of how much logistics support cost is minimally required to obtain the availability desired, which in turn can be weighed against the value of such additional availabilty."

Captain Harley L. Gill
U.S. Strategic Air Command/ACM
Offutt AFB, Nebraska

"1st Lt. Harley L. Gill (since promoted to captain) developed and implemented a broad program for Economic Analysis within the Strategic Air Command (SAC). The spectrum of his program includes conducting Economic Analyses, providing guidance to other SAC staff agencies and bases in preparing such analyses, administrative review of Economic Analyses before submission to USAF and a very effective training program.

"The role he took in Economic Analysis of new projects was impressive. He performed an extensive review of the MMICS (Maintenace Management Information and Control System) test at K. I. Sawyer Air Force Base, Michigan, using Economic Analysis techniques' contributing significantly to the evaluation which led USAF to implement MMICS Air Force-wide.

"His guidance and participation in other staff agencies' Economic Analyses were extensive, including:

a. Selection of a base computer at Glasgow Air Force Station, Montana.
b. Decision on whether to buy, rent, or contract requirements for a printing press at Offutt Air Force Base, Nebraska.
c. Development of replacement criteria for non-tac radio requirements at all SAC bases and a decision whether to buy or lease the equipment.
d. A determination of the cost effectiveness replacement alternatives for the March Air Force Base, California, telephone system.

"Three of his major contributions in the area of program evaluation involved decisions pertaining to: consolidation of printing plants at Griffiss Air Force Base, New York, and Offutt Air Force Base, consolidation of clothing sales and Base Exchange facilities at McConnell Air Force Base, Kansas, and a determination of whether to use Air Force vehicles or General Services Administration (GSA) rental vehicles at SAC northern tier bases.

"Completely on his own initiative, he developed a short course on Economic Analysis, complete with lecture, outside reading and problem assignment."

Captain W. Larry Shelby
Headquarters, U.S. Army Materiel Command

"Captain W. Larry Shelby's contribution to a major management breakthrough was accomplished by his devising a system from which the Army Materiel Command (AMC) can measure and evaluate the performance of its operations. During 1973, the AMC comptroller provided the general parameters for developing a system to gauge productivity. For the next five months Captain Shelby

Engebretson

Forry

Gill

Shelby

Speed

Verbeke

methodically developed a quantified measurement system to evaluate the critical management cornerstones of subordinate organizations. The efficiency and effectiveness evaluation system developed by Captain Shelby has been briefed to a wide range of managerial echelons and has received enthusiastic plaudits from all levels. This is the first public-sector system which merges efficiency and effectiveness into a consolidated evaluation system. Only through Captain Shelby's extremely intelligent and perceptive approach was this system developed and implemented, and it has now become an essential managerial tool."

Major Billy L. Speed
Marine Corps Air Station (Helicopter)
Santa Ana, California

"Major Billy L. Speed during 1973 demonstrated an exceptional competence in the performance of all duties. As a captain (recently promoted to major) he served as comptroller of Marine Corps Air Station (Helicopter), Santa Ana, California, fulfilling a most demanding billet.

Major Speed advised the commanding officer in all facets of financial management relative to budgeting, budget execution, internal review, accounting, disbursing, cost reduction, and economic analysis. Supervision of budget formulation and budget execution, performance analyses, and planned programs for improvement of management effected better utilization of available resources.

In addition to his regular duties, Major Speed has voluntarily performed a detailed Economic Analysis of the lead activity service support areas with emphasis on public works activities. This detailed Economic Analysis reflected the interaction of variable and constant factors which had a dynamic cause and effect relationship.

Major Speed's professional conduct and exceptionally meritorious performance reflect great credit upon himself, this Station, the Marine Corps, and the Department of Defense."

Robert H. Verbeke
Office of the Assistant Comptroller of the Army

"During 1973, Robert H. Verbeke served as the principal technical coordinator for Economic Analysis within the Army Staff. He rewrote the basic Army Regulation, AR 37-13, eliminating several ambiguities that had caused confusion. He directed a contractor research effort that resulted in a four-volume handbook on the application of Economic Analysis within the Department of the Army. He was frequently called upon to serve as technical arbitrator on analyses where more than one Army agency had a major interest in the project and where the interested agencies were in disagreement on such points as preferred techniques, completeness and/or applicability of certain data, and methods of display. In each such case, Mr. Verbeke was able to resolve the differences, and more important, and in tribute to his fairness and outstanding technical competence, both parties agreed in spirit as well as form to his recommendations."

Productivity Symposium Scheduled

Federal, State and local government productivity goals . . . what should they be? How do we get there? How do we know when we've arrived?

These questions, and many more, will be addressed at a Government-wide productivity symposium to be held at the Colonial Williamsburg Conference Center, Williamsburg, Virginia, on December 8, 9 and 10, 1974.

In a series of remarks on productivity, Senator William Proxmire recently stated that, "Asking these questions is . . . vital to getting more for our tax dollar." Productivity is drawing increased attention throughout government, and is a particularly timely and appropriate subject for all levels of the Federal, State and local financial management community.

Recognized productivity leaders as well as successful operating officials from the Federal, State and local scene will make up a program structured around thought-provoking presentations, question/answer sessions and participative workshops aimed at major productivity issues.

The symposium is being sponsored by the American Society of Military Comptrollers and the Federal Government Accountants Association, both headquartered in Washington, D.C. Advance registration data is available from the Symposium Registrar, George Koback, P.O. Box 30245, Bethesda, Maryland 20014 or by phone at (202) 697-4352.

Nine Work Exchange of

Among the highlights of the recent 1974 Defense Economic Analysis Council (DEAC) Symposium in Washington, D.C. were the nine workshops, each centering on a different aspect of Economic Analysis and Program Evaluation. In addition to providing a forum for the exchange of information between headquarters and field personnel and betwen persons from different Services and organizations, the workshop participants were asked to come up with specific recommendations to improve the application and use of Economic Analysis and Program Evaluation.

At a later date the DEAC will present the most valuable recommendations to the Assistant Secretary of Defense (Comptroller) as official DEAC recommendations into the policy-making apparatus of the Department of Defense. Provided below are some of the highlights of the workshops.

1. **"Analysis Concerning Major Procurements"; Chairman: Tim Hardy, Office of the Assistant Secretary of Defense (Comptroller).**

The major procurements workshop spent considerable time discussing the effects of inflation on the DoD budget. The current DoD method of calculating projected inflation indices was reviewed, and the political constraints on projecting realistic estimates discussed. Some concern was expressed that inflation projections become self-fulfilling prophecies. The pros and cons of using DoD-wide or project-by-project indices were weighed. Reporting of inflation projections and experiences was also considered in the context of the new Selected Acquisition Report format which explicitly separates out inflation impacts.

More general discussion concerned whether affordability within given budget constraints should be a concern of the individual economic analyst, whether discounting was expected in weapons system analyses, whether development of a data base for life cycle costing of weapons systems would be valuable enough to merit the costs, and what is the proper place in the DoD organization for economic analysts.

2. **"Applications of Economic Analysis to Training Programs"; Chairman: Keene Peterson, Office of the Assistant Secretary of Defense (Manpower and Reserve Affairs).**

The workshop participants, from DoD, CSC, OMB and GAO, focused upon practical aspects of estimating and measuring the benefits/outputs, costs, and resource commitments of training programs. It was concluded that it is desirable to analyze and evaluate training programs within the context of the personnel and manpower systems of which they are a part and that definitions and record-keeping/reporting practices be codified so that comparisons between time periods (for evaluating improvement) and between or among programs (for evaluating relative effectiveness and efficiency) are feasible and practicable. Also addressed were the use of relative measures of merit in training program benefit/output determination, standardization of training activity categories, and the application of commonly accepted standard costing conventions within the training community.

3. **"Economic Analysis in Commercial and Industrial Type Operations"; Chairman: Vernon J. Dwyer, Office of the Assistant Secretary of Defense (Installation and Logistics).**

In view of the multibillion dollar scope of the commercial/industrial program, the DEAC should have a representative from this functional area.

The current Department of Defense Instruction (DoDI) on Economic Analysis (EA) should make provisions for the application of EA to the commercial/industrial activities. The DoDI on commercial/industrial activities should be updated to include the use of Economic Analysis.

Courses of instruction at the DoD schools on Economic Analysis should include instruction in commercial/industrial techniques and procedures as is done in courses in C/I activities.

There should be improved communications at all levels between people involved in Economic Analysis and in commercial industrial activities. Presently, there is quite often minimal or inadequate communication between these parties.

4. **"Economic Analysis of Energy Alternatives at the Installation Level"; Chairmen: Millard Carr, LTJG Kenneth Shachmut, Department of the Navy.**

The completely unique energy situation—unavailability and rapidly escalating costs—requires a complete, in-depth review of traditional Economic Analysis techniques. The basic historical assumptions of readily available, cheap energy are no longer valid. Economic Analysis tools must be resharpened to enable the decision-maker to take a thinner slice of all alternatives involving energy costs.

The workshop concluded that the Defense Economic Analysis Council should foster the establishment of a standing committee to study the unique Economic Analysis constraints associated with energy-related projects and programs. The increasing emphasis on energy costs and conservation-related capital investments is generating an urgent need for uniform analysis guidance. This committee could provide this general policy

The Defense Economic Analysis Council is compiling a shopping list of speakers on various related topics. Do you know of good examples of outstanding applications of Economic Analysis, Program Evaluation, or output measurement concepts at the operating level? Would you be willing and able to share your experiences with others by appearing as a guest speaker at symposia, meetings or in the classroom? If so, send your qualifications and other specifics to Lt. Col. J. A. McHugh, Defense Economic Analysis Council Speakers Bureau, OASD(C), 3B884, Pentagon, Washington, D.C. 20301.

shops Provide Information

guidance at the DoD level for all related programs.

The group's basic parochial recommendation is the establishment of a continuing tri-Service working group at the DASD (I&L) level to investigate specific peculiarities of facilities/energy Economic Analysis.

Specifically, the objectives of the recommended facilities/energy working group would be to develop concrete DoD policy in all areas of energy-related Economic Analysis and Program Evaluation.

5. "Educational and Training Aspects of Economic Analysis and Program Evaluation"; Chairman: Dr. William Mauer, Army War College.

The workshop participants consisted of 32 educators, trainers, and operating level managers. The group approached its task analytically. First, an attempt to determine our problem environment resulted in the following key observations:

- Scarce resources were responsible for both our education and training objectives regarding Economic Analysis and our inability to meet them effectively;
- Top and middle management lacked either singly or in combination the interest in or acceptance, support, or knowledge of Economic Analysis;
- Since outputs are difficult to identify and assess, disproportionate educational effort has been given to cost considerations; and
- The time dimension in decision-making continues as a major stumbling block.

Given these environmental factors, the group then identified basic needs to be satisfied and recommended that the DEAC should offer as much assistance as possible in seeking means to satisfy them. They were: (1) Identify, then educate and train, practitioners (doers) of Economic Analysis; (2) Inform managers/decision-makers through the means of education, salesmanship, and pain-reward processes of the form, substance, and utility of Economic Analysis; and (3) Create a central repository, including a collection/dissemination system, of education-related information about Economic Analysis in both DoD and elsewhere.

Finally, a subset of the workshop participants have agreed to continue the workshop effort through the coming year.

6. "Flipside of Cost Effectiveness: Measuring Output"; Chairman: Lt. Col. Herbert Puscheck, Department of the Army.

The workshop, which had 120 participants, considered a wide spectrum of output measures from workload indicators to gross measures of organization effectiveness. Among the conclusions reached by the workshop members were that: considerable innovative effort is underway in the Services on improving and using output measures; most of this effort appears in the support and industrial areas as opposed to the tactical, operating areas; and that special attention should be paid to assessing the quality of output measurement. It was also recommended that a mini-symposium on Program Evaluation be considered during FY 75.

7. "Motivation for Economic Analysis Implementation"; Chairman: Dr. Robert Schultz, Department of the Navy.

Among the conclusions reached by workshop participants were that Economic Analysis and Program Evaluation must be integrated parts of a decision-making mechanism and in this context, while the Economic Analysis function is generally placed under the Comptroller, the direct relationship to decision-making dictates nonseparability from planning done for top management decisions. It was felt that the use of the methodology should develop naturally within the overall decision context and that required use should be limited to instances of major importance. The workshop noted that Economic Analysis is necessarily a staff function, and that recipients of this staff assistance should perceive the assistance as help, and not as an intrusion by persons seeking authority in decision-making without the responsibility for implementation. The emphasis in program evaluation should be on the present decision situation ("Which way should we be going now?") rather than questioning the validity of past decisions. Since sufficient time is an essential ingredient of a good Economic Analysis, operating management, while being encouraged to make greater use of the methodology, must also be cautioned against wasting trained talent on a continuing diet of "fire-drill" exercises. Another recommendation was that since increasing numbers of analyses are proposing achievement opportunities and problem solutions dependent upon transferring funds between major accounts, i.e., O&M versus Other Procurement, simplified procedures should be available for such transfers.

8. "Program Analysis of ADP"; Chairman: John Carabello, Office of the Assistant Secretary of Defense (Comptroller).

This workshop had several major recommendations. In order to anticipate future need and resource allocation requirements, DoD should develop a Corporate Game Plan for Automatic Data Processing (ADP)

The ninth Annual DoD Cost Analysis Symposium will be hosted by the Air Force Directorate of Management Analysis at Airlie House, Virginia, September 22-25 1974. One of the eight workshops will address Economic Analysis and Program Evaluation. Invitations are being extended through the Departments' Cost Analysis Office:

OSD: Cost and Economic Analysis, OASD (PA&E)
Air Force: Cost Analysis Division (AF/ACMC)
Army: Cost Analysis Directorate (DACA-CAF)
Navy: Cost Review and Analysis (NCR)

using Program Analysis to forecast major micro-level trends. ADP policy guidance should be revised to stress the concept of life cycle systems management and analysis with special consolidation given to the need for careful requirements determination and problem definition and the decreasing economic importance of hardware considerations. The development of cost estimating relationship for ADP and the design-to-cost concept should be explored for applicability in controlling software costs. Throughout the ADP community, increased emphasis should be placed on cost comparisons of contractor versus in-house alternatives for obtaining ADP support. The feasibility of funding ADP support through industrial rather than institutional funding should be examined on a high priority basis. ADP systems development must be vested in a project manager to facilitate completion of development on time and at cost.

9. **"Transportation Analysis"; Chairman: Peyton Wynns, Department of Transportation.**

Although the workshop did not develop a set of recommendations relating to the DoD use of economic analysis, it was both valuable and productive. The workshop focused on the techniques and application of Economic Analysis to a variety of transportation problems. In this context, both the versatility and utility of Economic Analysis in the area of transportation were well demonstrated.

COMMANDERS DIGEST

Vol. 16, No. 6, August 8, 1974

A publication of the Department of Defense to provide official and professional information to commanders and key personnel on matters related to Defense policies, programs and interests, and to create better understanding and teamwork within the Department of Defense.

Published weekly by the American Forces Press Service, 1117 N. 19th St., Arlington, Va. 22209, a unified activity of the Office of Information for the Armed Forces, OASD (M&RA). Reproduction of content is authorized.

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in more ways than one

ULREYS' BOOK A HIT

"Analysis—For Managers of People and Things," a booklet authored by Dr. Ivon W. Ulrey and Dr. Ann P. Ulrey has proved to be a hit in more ways that one. Not only has the booklet proved to be a runaway bestseller, but it is now an award winner as well.

The Doctors Ulrey recently were honored by the American Society of Military Comptrollers (ASMC) at the Society's National Symposium. Rear Admiral James E. Forrest presented the ASMC "Best Author" award at the Society's recent awards luncheon. The co-authors were nominated by Dr. H. Paul Ecker, Executive Director of the Navy Management Systems Center of the Naval Postgraduate School at Monterey, California. Dr. Ecker described the unique contribution of the Ulreys in this fashion:

" 'Analysis—for Managers of People and Things' represents a dramatic departure from the usual approach to the role of analysis in DoD decision-making. For the first time a text has been developed with the avowed purpose of assisting the operating level manager in the systematic application of the concepts and techniques of Economic Analysis to the myriad daily decisions which he faces.

"It clearly and concisely identifies and discusses practical applications of Econom Analysis. It provides examples that can easily be related to real world situations. It is highly readable and does not require knowledge of advanced mathematics for understanding. The guidelines contained in this text provide an unparalleled opportunity for improvement in DoD resource management, especially in those activities funded from operation and maintenance (O&M) and military personnel appropriations, where more than 50 percent of DoD resources are concentrated.

"The goal of the Ulrey team (to help the operating manager) has obviously been reached. Over 8,000 copies have been distributed. Many managers have taken the text to heart, and the word has spread: 'Here's the painless way to find out how to make analysis work for *you!*' The authors address the problem of converting data into information in the real world by planning in advance what information will be needed and how it will be used. 'Some techniques of analysis' are presented in Part II of the book. This presentation remains true to the authors' goal of reducing the arcane and mystical tools of analysis to a usable level. Part III lets the reader 'walk-through' the problem-solving process as participants in real world operations such as pilot training, pharmacy store operations, and labor productivity management."

Copies of the Ulreys' award-winning booklet are available at $1.45 each from the Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402. However, be sure to include the GPO reference number (0840-00062), or your request may be delayed. Anyone who has previously ordered the book but didn't have the reference number, might be well advised to resubmit the request.

A new training film titled, "Economic Analysis Hits Home," will soon be released by the Education Committee of the Defense Economic Analysis Committee. This nine-minute animated cartoon presents a light treatment of the necessary steps of analysis and compares these steps to an everyday household problem. Watch your film release announcements for details on how and where to order copies for your training programs.

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